

REMARKS

In the outstanding Office Action, a restriction was made between claims 1-61 and 71-86 directed to a steerable machine, and claims 62-70 directed to a method of operating a machine. Based on this, claims 62-70 were withdrawn from consideration. Also in the outstanding Office Action, claims 12-47 were rejected under 35 U.S.C. § 251 as being an improper recapture of subject matter surrendered in the parent patent; claims 23 and 37 were rejected under 35 U.S.C. § 112, second paragraph; and claims 1-11, 48-61, and 71-86 were allowed.

Applicants thank the examiner for the indication of allowable subject matter and for the courtesy of a personal interview on January 5, 2006. The remarks below are consistent with the issues raised during the personal interview.

By this amendment, claims 1, 48-51, 58, 61-66, 71-74, 76, and 77 have been amended, claims 12-47, 55, 67, and 84 have been canceled, and claims 87-114 have been added. Accordingly, claims 1-11 and 48-54, 56-66, 68-83, and 85-114 are pending in this application, and claims 12-47, 55, 67, and 84 are canceled. Claims 62-70 have been withdrawn from consideration. The amendments to the claims and the newly added claims do not introduce new matter.

Claims 1, 48-51, 58, 61, 63-66, 71-74, 76, and 77 have been amended to further clarify the claims and maintain consistent terminology throughout the claims. The amendments to the previously submitted new claims 48-51, 58, 61-66, 71-74, 76, and 77 are provided in redline format in Appendix B of this Reply.

As noted above, claims 12-47 have been canceled without prejudice to resubmission. Accordingly, the rejection of claims 12-47 under 35 U.S.C. § 251 is moot and should be withdrawn. Additionally, the rejection of claims 23 and 37 under 35

U.S.C. § 112, second paragraph, is moot in light of the cancellation of these claims.

Applicants request that this rejection also be withdrawn.

As discussed during the interview, Applicants have amended independent method claim 62 in an attempt to have the restriction requirement removed. Claim 62 has been amended to properly introduce “the frame” by amending the claim to recite --a frame of the machine--, and the following has been inserted at the end of the claim:

the pivoting of the first rear support and steering of the first and second front supports and first rear support including actuating a plurality of actuators; and
controlling at least the pivoting of the first rear support and steering of the first and second front supports and first rear support by an operator positioned in an operator cab.

In the outstanding Office Action, reference is made to differences between the processes of claims 62-70 and the apparatus of claims 1-61 and 71-86. In particular, the Office Action states that the process for using the product of claim 62 could be achieved by a machine that did not include a driver's cab or actuators. See, page 2, last line, of the outstanding Office Action. Process claim 62 now incorporates an operator's cab and actuators. Thus, the examiner's specific rational for restriction has been removed by the amendments to claim 62. In view of this, Applicants submit that examining claims 62-70 with the remaining claims would not pose a serious burden on the examiner. See, M.P.E.P. § 803(l). This request by Applicants that claims 62-70 be examined with the remaining claims should not be interpreted as an assertion that independent claims 62-70 are patentably indistinct from any other claims in this application.

Finally, new claims 87-114 have been added to this application, of which, claims 103 and 107 are in independent form. New independent claim 103 is similar to allowed

claim 48 except for the replacement of “electronic control unit” with --control circuit-- in the last phrase of the claim. Applicants submit that claim 103 is allowable for at least the same reason that independent claim 48 has been indicated as allowable.

New independent claim 107 is similar to allowed claim 77, but with the addition of “at least one steering hydraulic cylinder” to line 5 of the claim. Additionally, claim 107 differs from allowed claim 77 by the replacement of “front steering means” with --front steering assembly--, “rear steering means” with --rear steering assembly--, and “traction means” with --traction means assembly--. These replacements make it clear that these aspects of the claim are not to be interpreted under 35 U.S.C. § 112, sixth paragraph. Applicants submit that claim 107 is allowable for at least the same reason that independent claim 77 has been indicated as allowable.

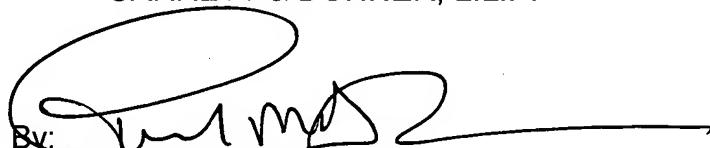
Appendix A to this Reply provides exemplary support for each of the claim amendments and new claims submitted with this reply. As noted above, no new matter has been added by this Reply.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims. The examiner is encouraged to contact the undersigned at 202.408.4469 if the examiner believes that such a call could expedite prosecution of this application.

Please grant any extensions of time required to enter this response and charge
any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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APPENDIX A

Claims	Exemplary Support for Amendments/New Claims
1	See, e.g., the abstract; col. 2, lines 11 and 12, and original claim 1.
62	See, e.g., col. 3, lines 14-20 and 29-42, col. 4, lines 1-23, and Figs. 1, 6, and 7.
48-51, 61, 72-74, and 76	See, e.g., col. 4, lines 1-24 and Figs. 6 and 7.
62-66	See, e.g., col. 3, line 33 to col. 4, line 23, and Figs. 5-7.
71	See, e.g., the abstract; col. 2, lines 11 and 12, and original claim 1.
77	See, e.g., col. 4, lines 1-24, and Figs. 1, 6 and 7.
87, 88, 91-93, 99, 100, 104-106, 108-110	See, e.g., col. 4, lines 10-43, and Figs. 3-7.
103	See, e.g., col. 3, lines 4-66, col. 4, lines 1-57, and Figs. 1 through 7.
89, 90, 94-96, 98 101, 102, 111-113	See, e.g., col. 3, lines 24-32, and Figs. 1, 2, and 4.
107	See, e.g., col. 3, lines 4-66, col. 4, lines 1-57, and Figs. 1 through 7.
97, 114	See, e.g., col. 3, lines 48-67 and Figs. 6 and 7.

APPENDIX B

Provided below is a list of the previously submitted new claims that have been amended by this Reply with strikethrough to indicate deletions and underlining to indicate additions.

48. A machine for breaking up ground comprising:
 - a frame;
 - at least a first and second rollable front support;
 - at least a first and second rollable rear support, at least the first rear support being pivotable about a vertical axis between a retracted position and an extended position with respect to the frame;
 - at least one driver's cab located in said frame;
 - a ground breaking device coupled to the frame and configured to contact the ground;
 - a traction system coupled to the frame and configured to rotate at least one of said rollable supports; and
 - a maneuvering steering system controllable from said driver's cab and configured to selectively steer the front supports and at least the first rear support at the same time, the maneuvering steering system including
 - at least one rear hydraulic actuator configured to steer the first rear support,
 - at least one front hydraulic actuator configured to steer at least one of the first and second front supports, and
 - an electronic control unit configured to coordinate movement of the at least one rear and at least one front hydraulic actuators.

49. A machine according to claim 48, wherein the maneuvering steering system further includes a first position detector operatively coupled to at least one of the first and second front supports, and a second position detector operatively coupled to at least the first rear support, the electronic control unit configured to electronically communicate with each of the first and second position detectors.

50. A machine according to claim 49, wherein the maneuvering steering system further includes a third position detector configured to determine whether the first rear support is in the retracted position, the third position detector including a microswitch travel switch.

51. A machine according to claim 48, wherein the maneuvering steering system further includes a plurality of position detectors, the electronic control unit configured to coordinate movement of the at least one rear and at least one front hydraulic actuators in response to signals received from the plurality of position detectors.

58. A machine according to claim 48, further comprising a chassis coupled to the first rear support, the chassis[[,]] including a support plate and a yoke member, the yoke member being rotatable relative to said support plate.

61. A machine according to claim 48, further including:
a first valve configured to supply hydraulic fluid to the front actuator;
a second valve controlled by said maneuvering steering system and configured to supply hydraulic fluid to the rear actuator;
a first position detector cooperating with said front actuator;
a second position detector cooperating with said rear actuator;
the electronic control unit cooperating with the maneuvering steering system and configured to operate said rear actuator in response to the steering of the first and second front supports; and
the electronic control unit electrically coupled to said first and second position detectors, to a third position detector configured to determine whether the first rear support is in the retracted position, and to the first and second valves.

62. A method of operating a machine having first and second rollable front supports, and first and second rollable rear supports, comprising:
controllably pivoting the first rear support between a retracted position and an extended position with respect to the a frame of the machine;
controllably contacting a ground breaking device of the machine with the ground;
rotating at least one of the first and second front and rear supports;
steering the first and second front supports;
steering the first rear support in a coordinated manner with the first and second front supports, the pivoting of the first rear support and steering of the first and second front supports and first rear support including actuating a plurality of actuators; and
controlling at least the pivoting of the first rear support and steering of the first and second front supports and first rear support by an operator positioned in an operator cab.

63. A method according to claim 62, further including providing hydraulic fluid to a first actuator of the plurality of actuators to steer the first rear support.

64. A method according to claim 63, further including controlling the hydraulic fluid provided to the first actuator by an electronic control unit receiving signals from at least a first position detector cooperating with the first actuator, a second position detector cooperating with the a second actuator of the plurality of actuators, and a third position detector configured to determine whether the first rear support is in the retracted position.

65. A method according to claim 63, further including providing hydraulic fluid to at least one of the first and second front supports a second actuator of the plurality of actuators.

66. A method according to claim 65, further including providing hydraulic fluid to a third actuator of the plurality of actuators to move the first rear support in a vertical direction.

71. A steerable machine for breaking up ground comprising:
a frame;

at least one pair of rollable front supports and at least one pair of rollable rear supports, each of said front and rear supports including a chassis secured to the frame and said each of the front supports being rotatable about a front vertical axis and at least one of the rear supports being pivotable about a first rear vertical axis;

said chassis includes a yoke that supports said rear support, and has a vertical pivot journal coupled to revolve on a support plate fixed to an end of a second actuator;

said second actuator comprises a second hydraulic jack set with a vertical axis, which has a second rod with a second rod end fixed to said plate and a second cylinder end, wherein said rod slides, integral with said frame;

the cylinder of said second hydraulic jack is an integral part of said frame being connected thereto by means of a first articulation for moving said chassis with respect to a fixed point on said frame in order to move the rear rotatable support inward of said frame;

at least one driver's cab located in said frame;

a means for breaking up the ground connected to said frame;

traction means supported by said frame for rotating at least one of said rotatable rollable supports;

at least one first actuator operatively coupled to at least one rear support;

a maneuvering steering system accessible from said driver's cab for operating the first actuator for rotating at least one of said rear supports about a second rear vertical axis while turning the front supports of the machine.

72. A machine according to claim 71, wherein the maneuvering steering system further includes a third hydraulic actuator configured to steer at least one of the front supports, and an electronic control unit configured to coordinate movement of the at least the first and second hydraulic actuators.

73. A machine according to claim 71, wherein the maneuvering steering system further includes a first position detector operatively coupled to at least one of the front supports, a second position detector operatively coupled to at least one of the rear supports, and an electronic control unit configured to electronically communicate with each of the first and second position detectors.

74. A machine according to claim 73, wherein the maneuvering steering system further includes a third position detector configured to determine whether the pivotable rear support is in the retracted position, the third position detector including a microswitch.

76. A machine according to claim 71, wherein the maneuvering steering system is configured to selectively steer the pair of rear supports.

77. A steerable machine for breaking up ground comprising:
a frame;
at least one pair of rollable front supports, said front supports being rotatable about a front vertical axis and front steering means controlled by power steering for steering said front supports;
at least one pair of rollable rear supports, at least one of said rear supports being pivotable about a rear vertical axis and rear steering means controlled by at least one steering hydraulic cylinder for steering said pivotable rear support;
at least one driver's cab located in said frame;
a means for breaking up the ground connected to said frame;
traction means supported by said frame for rotating at least one of said rollable supports;
a maneuvering steering system accessible from said driver's cab for operating said front steering means and said rear steering means at the same time, from said driver's cab, the steering system including a manual steering input device.